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10/060,203	02/01/2002	Shinji Matsuo	1752-0154P	7503

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EXAMINER

THOMPSON, CAMIE S

ART UNIT PAPER NUMBER

1774

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/060,203

Applicant(s)

MATSUO ET AL.

Examiner

Camie S Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on September 29, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed September 29, 2003 have been acknowledged.
2. Examiner acknowledges amended claims 1, 6 and 7.
3. Examiner acknowledges cancelled claim 5.
4. The restriction requirement is withdrawn due to applicant's amended version of claim 7. Therefore, claim 7 is rejoined.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-3 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatwar et al., U.S. Patent Number 6,475,648.

Hatwar discloses an organic luminescent material such as a tertiary aryl amine that can be used in a hole-transporting layer in an electroluminescent device as per instant claims 1 and 6-7 (see abstract and column 4, line 35-column 6, line 68). The compounds found in column 5, lines 1-41 of the reference read on the tertiary aryl amines of instant claims 2 and 3. Figure 6 of the Hatwar reference discloses the initial 10% luminescence attenuation greater than 100 hours as per instant claims 1, 6 and 7.

Claims 1, 6 and 7 are product-by-process claims. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself.

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The patentability of a product does not depend on its method of production. If the product in the product-by-process claims is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113.

The purifying the crude tertiary amine by sublimation or distillation by the reaction of a haloaryl compound with an aryl amine does not make the end product of the instant application different from the Hatwar product. Both Hatwar and the instant application have an electroluminescent device comprising an organic luminescent material that is used in the hole-transporting layer wherein the luminescent material is a tertiary aryl amine. The product of the Hatwar reference is the same as the product of the instant application.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatwar et al., U.S. Patent Number 6,475,648 in view of Shi et al., U.S. Patent Number 5,593,788.

Hatwar discloses an organic luminescent material such as a tertiary aryl amine that can be used in a hole-transporting layer in an electroluminescent device as per instant claim 1 (see abstract and column 4, line 35-column 6, line 68). Figure 6 of the Hatwar reference discloses the initial 10% luminescence attenuation greater than 100 hours as per instant claim 1.

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The Hatwar reference does not disclose the use of N,N'-Bis-(1-Naphthyl)-N,N'diphenylbenzidine in the layer as per instant claim 4. Shi discloses an organic electroluminescent device wherein the hole-transporting layer contains at least one aromatic tertiary amine. Additionally, the Shireference discloses that in one form the tertiary amine can be an arylamine as per instant claim 1 (see column 6, lines 31-43). Column 16, lines 8-10 disclose that the hole transporting layer can comprise N,N'-Bis-(1-Naphthyl)-N,N'diphenylbenzidine as per instant claim 4. The use of diarylamines in the hole-transporting layer affects the stability of the device. Therefore, it would have been obvious to one of ordinary skill in the art to use N,N'-Bis-(1-Naphthyl)-N,N'diphenylbenzidine as the organic luminescent material in the hole-transporting layer of the device in order to obtain a device that has a high operational stability as taught by Shi in column 1, lines 15-20 and column 6, lines 30-68.

Claim 1 is a product-by-process claim. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113.

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The purifying the crude tertiary amine does not make the end product of the instant application different from the Hatwar product. Both Hatwar and the instant application have an electroluminescent device comprising an organic luminescent material that is used in the hole-transporting layer wherein the luminescent material is a tertiary aryl amine. The product of the Hatwar reference is the same as the product of the instant application.

Response to Arguments

9. Applicant's arguments with respect to claims 1-4 and 6-7 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.


Cynthia H. Kelly